

Assessing the Impact of Forest Village (Orköy) Supports on Agricultural Holdings: Evidence from Farm Managers in Kayseri, Turkey

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The main purpose of this study is to reveal the relationship between the utilization of ORKÖY supports and job performance of business managers operating in forest village status (ORKÖY) villages in Kayseri province. Job performance is the sum of the efforts of human resources in organizations to achieve their corporate goals. The material of the research consists of the data obtained from 135 business managers in 11 villages. When the findings of the research are analyzed; a significant portion (56.30%) of the managers benefiting from ORKÖY supports are in the 46-65 age group. Men constitute 82.96% of the beneficiaries of the support. 89.63% of the participants are married, and this rate is quite high among the beneficiaries of ORKÖY support. When the education level is analyzed, it is seen that the majority of the participants (64.44%) are primary school graduates. The rate of associate, undergraduate and postgraduate graduates was limited to 6.67%. The average number of children is 3.07, while the average number of people in the household is 4.68. The average income of the enterprises was calculated as 16,410.61 TL. According to the results of the research, it was determined that there were significant differences between the job performance of enterprise managers in some forest villages. In addition, the majority of the participants (83%) who benefited from ORKÖY support found the support insufficient. Of those who received support, 29% stated that they were thinking of turning to other sources of financing other than ORKÖY loans. This situation reveals that ORKÖY credit support alone is not sufficient and that additional financial resources are needed. It is thought that the results of this study will contribute to the field of Agricultural Economics and Management Sciences.

Keywords: Job performance, agricultural holdings, forest villages (ORKÖY), rural developments, organizational behavior.

INTRODUCTION

The agricultural sector has strategic importance in terms of ensuring food security, supporting rural development and contributing to economic growth. However, business performance in the sector is affected by many factors such as climate conditions, technological infrastructure, workforce qualifications and government policies (Kara & Demirtaş, 2019). Increasing performance requires considering not only the amount of production but also productivity, quality standards and sustainability (Yılmaz, 2021). In this context, evaluating business performance in the agricultural sector is of great importance in terms of analyzing the effectiveness of sectoral policies and developing strategies to increase productivity. Performance appraisal is a process of “measuring” the performance of individuals, units or organizations according to some predetermined criteria or on the basis of “the performance of similar others”. As some researchers and practitioners in the field of human resource

management emphasize, performance appraisal is one of the most difficult, complex, and unlikely to satisfy everyone involved (Mohrman et al., 1989). Job performance in agricultural enterprises is a multifaceted construct that encompasses both task-related outcomes and contextual behaviors that contribute to organizational effectiveness (Borman & Motowidlo, 1997). In agricultural contexts, performance is often influenced by environmental uncertainty, access to resources, managerial competencies, and the degree of technological adoption (Meuwissen et al., 2001). According to Griffin et al. (2007), work performance is not only defined by the completion of formal job duties but also includes adaptability and proactivity, which are particularly relevant in dynamic sectors like agriculture. Furthermore, human capital theory emphasizes the importance of education, training, and experience in shaping performance outcomes (Becker, 1993). Job performance is a fundamental phenomenon for organizations, managers and employees. As a matter of fact, in order for organizations to

Ozdemir, H. O. (2026). Assessing the Impact of Forest Village (Orköy) Supports on Agricultural Holdings: Evidence from Farm Managers in Kayseri, Turkey. *Journal of Global Innovations in Agricultural Sciences*, 14, 219-226.

[Received 15 Jan 2025; Accepted 14 Apr 2025; Published 3 Oct 2025]



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achieve their corporate goals and gain competitive power in the sector they are in, they need employees who show high performance in their work. Completing their tasks properly and achieving high success in their work is a source of pride, skill and satisfaction for individuals; job performance is the basic condition for many business outcomes that are important for individuals such as higher income, a better career and social reputation (Sonntag & Freese, 2002).

When the studies on the relationship between the agricultural sector and job performance are examined in the literature, it is seen that there are limited studies. Anesukanjanakul et al. (2019) examined the role of knowledge and employee overload on job performance in the agricultural sector. The researchers stated that the professional development of employees or leaders is of considerable value in organizations that want to improve the performance of the agricultural sector. In particular, they noted the need to provide a knowledgeable and satisfying work environment to improve employee performance. Tiraeyari et al. (2010) selected 210 extension workers from the Ministry of Agriculture in four states of Malaysia using stratified random sampling technique. They used a structured research instrument to investigate the competence and job performance of agricultural extension workers. As a result of the research; in summary, they determined that technology transfer is prioritized over human development in the agricultural sector. Rezaie et al. (2008) investigated the factors affecting the job performance of agricultural extension workers in Yazd, Iran. The findings of the study revealed that there is a significant correlation between job performance and job satisfaction, job motivation, job attitude, job ability, amount of use of information sources and communication channels, amount of participation in mass media and amount of participation in organizational management. Fabusoro et al. (2008) examined the relationship between job motivation and performance of agricultural extension workers in Nigeria. As a result of their research, they found that the relationship between manager and employee is the most important factor affecting job performance. Rathod & Deshmukh (2022) conducted a study on agricultural extension personnel in Latur city and found that age, education, gender, experience, training and achievement motivation of agricultural extension personnel had a positive and highly significant relationship with job performance. Adebayo et al. (2020) conducted a study on the motivation and job performance of employees in agricultural institutes and found that job supervision and motivation affect the job performance of employees. The vast majority of forest areas in Türkiye are state-owned and managed by the public administration. According to Durkaya et al. (2017), this means that forests are a common value of the citizens of the Republic of Türkiye. For this reason, forests are managed to increase social benefit rather than individual gain. This approach can be defined as “responding to the expectations and demands of society from forests at the highest level

permitted by existing conditions without permanently damaging the existence, natural balance and carrying capacity of forest ecosystems”. One of the primary objectives of rural development policies is to increase both the scope and diversity of initiatives aimed at disadvantaged groups residing in rural areas. Within this context, forest villagers represent a particularly significant segment of the rural population (Kan et al., 2020; Kan et al., 2025). In Türkiye, a considerable portion of the rural population lives in forest villages, which typically possess limited agricultural land compared to other rural settlements. Moreover, these villages are generally located in remote, mountainous, and forested regions, far from urban centers. In the Strategic Plan of the General Directorate of Forestry for 2024-2028, the fifth strategic objective is defined as “Supporting the On-site Employment and Development of Forest Villagers.” Under this objective, Target 5.1 states: “Forest villagers will be supported through socio-economic projects, thereby improving forest-community relations, contributing to on-site employment, and promoting the sustainable management of forests” (OGM, 2025). In line with this strategic framework, various support mechanisms have been introduced to both enable forest villagers to remain in their native areas and to enhance their economic resilience.

The above-mentioned literature studies show that studies on job performance in the agricultural sector have been carried out especially for agricultural extension personnel or those working in agriculture. This study is a special study in terms of showing the relationship between the ORKÖY supports received by the managers of agricultural enterprises and their job performance. It is important in terms of showing that this study will make a strong contribution to the literature and science, since such studies have not been conducted or rarely conducted for the managers of agricultural enterprises in previous studies.

MATERIALS AND METHODS

Materials: The material of this study was composed of business managers in the villages that are considered as forest villages in Kayseri province. The names of these 11 villages within the scope of forest villages (ORKÖY) in Kayseri province are Ortaköy, Koçcuazgız, Balçıcakırı, Alpaslan, Karpuz Sekisi, Ulupınar, Büyük Toraman, Kapuzbaşı, Kızılören, Derebağ. Within the scope of the research, data obtained from 135 enterprise managers from 11 villages were used. Between 2021-2024, support was provided to the managers in the 11 villages determined by lottery method. 431 business managers from these 11 villages were included in the lottery.

Methods: Of the business managers who entered the lottery and were entitled to receive support, 135 were determined by simple random sampling method and a questionnaire was applied to these business managers. The questionnaire form



used in the research consists of two parts. The first part of the questionnaire consists of demographic questions for the managers of agricultural enterprises and data obtained from a part of Akçam's (2019) study. The second part of the survey consists of a ready-made job performance scale that Tercan (2007) cited from Karakurum (2005). The research is in quantitative research design and the analyses were analyzed with The jamovi Project (version 2.3) (2022) statistical program. In the analyses, independent sample t test and one way anova were used if the parametric test assumptions were met, and mann whitney U and cruskall Wallis tests were used if the assumptions were not met.

RESULTS

Kayseri is located in the Middle Kızılırmak section where the southern part of Central Anatolia and the Taurus Mountains approach each other. It lies between 37 degrees 45 minutes and 38 degrees 18 minutes north latitude and 34 degrees 56 minutes and 36 degrees 58 minutes east longitude. It is surrounded by Sivas to the east and northeast, Yozgat to the north, Nevşehir to the west, Niğde to the southwest, and Adana and Kahramanmaraş to the south. It is a province and the 15th most populous city in Türkiye. As of 2014, it had a population of 1,322,376. It consists of 16 districts: Akkışla, Bünyan, Develi, Hacılar, İncesu, Kocasinan, Melikgazi, Pınarbaşı, Sarıoğlu, Sarız, Tomarza, Yahyalı, Talas, Özvatan, Felahiye and Yeşilhisar (CSB, 2025).

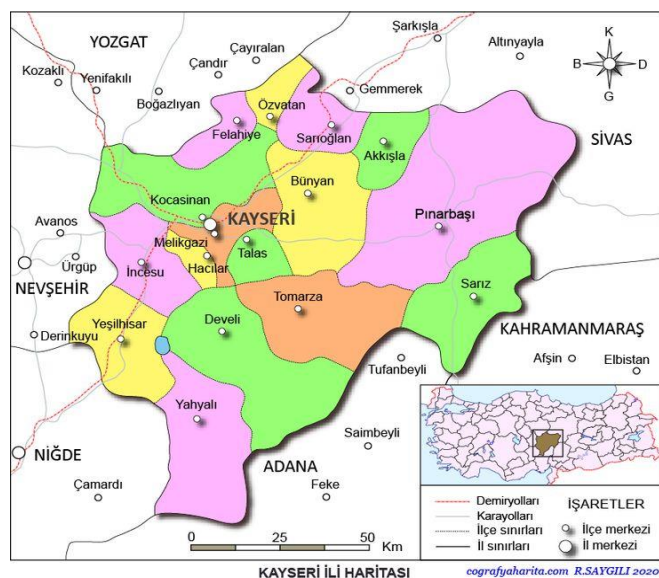


Figure 1. Study area map.

Among the research findings, demographic findings were given first, then findings on validity and reliability were given, and finally findings related to the research questions were given.

Table 1. Demographic charectersitics of the agricultural holdings.

		Count	Column N %
Age	18-25 Age	7	5.19%
	26-45 Age	47	34.81%
	46-65 Age	76	56.30%
	65-+ Age	5	3.70%
Sex	Male	112	82.96%
	Female	23	17.04%
Marital status	Married	121	89.63%
	Single	14	10.37%
Education Level	Primary education	87	64.44%
	Secondary education	39	28.89%
	Associate degree	8	5.93%
	Undergraduate degree	1	0.74%
	Postgraduate degree	0	0.00%
Number of Children			3.07
Income			431,16\$*
Number of families in the household			1.07
Number of people in the household			4.68

*Indicative Exchange Rates Announced at 15:30 on 04/10/2025 by the Central Bank of Türkiye

As a result of the research, when the average age of the enterprise managers benefiting from ORKÖY supports is analyzed, it is seen that the highest rate is in the 46-65 age range with 56.30%. In terms of gender, it was seen that 112 (82.96%) of the business managers who benefited from the support consisted of male managers. In terms of marital status, married managers constitute the majority with 121 people (89.63%). As a result of the research, 87 (64.44%) of the people living in forest villages and benefiting from the support are primary school graduates. It is noteworthy that there are few (6.67%) managers who benefit from the support at associate, undergraduate and graduate level. The average number of children of the business managers benefiting from ORKÖY supports is 3.07. The average income of the enterprises was realized as 431.16 \$* (16,410.61 TL). Mostly 1 family lives in the household and the average number of people living in the household is 4.68.

Findings on validity and reliability: The questionnaires prepared within the scope of the research consist of two stages. The first part consists of demographic questions and the second part consists of a ready-made scale. The validity and reliability results for the ready-made scale are explained below.

Table 2. Reliability indices.

Variable	α	ω	AVE
Performance	0.881	0.915	0.534



In the analyses, it was found that croncah $\alpha=0.881$, McDonald's $w=0.915$ and $AVE=0.534$ for scale reliability. In the literature, the AVE value should be higher than 0.5. In this respect, it shows that the scale is sufficient to measure the job performance of the study group at 53% level. When the figure is examined, it is seen that the standardized beta values are above 0.4. This shows that the scale is sufficient to measure the job performance of the research group (Epskamp et al., 2019; R-Core Team, 2021; Revelle, 2019; Rosseel, 2019; Gallucci & Jentschke, 2021)

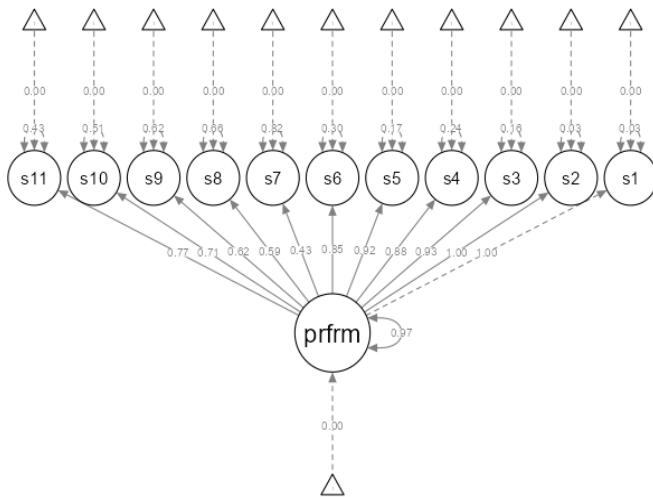


Figure 2. Job performance scale standardized confirmatory factor analysis diagram.

Confirmatory factor analysis was used to determine the validity of the scale and to test the accuracy of the structure. In confirmatory factor analysis, latent variables represent a theoretical construct while observed measurements are designed as indicators of this construct (Jöreskog & Sörbom, 1993). From this point of view, as seen in Figure 2, an equation modeling was established in which the single-factor and 11-observed variable structure revealed by confirmatory factor analysis could be predicted accurately. When Table 3 is examined; as a result of the confirmatory factor analysis, it was determined that the Chi-Square (χ^2) value, which varies according to the sample size, was 78 and the degree of freedom (df) was 33. The χ^2/df is 2.36. It can be said that this value means acceptable fit (Kline, 2005). When the data in Table 4 are analyzed; (RMSEA)= 0.102; (SRMR)= 0.080; (CFI)= 0.997; TLI= 0.996; NNFI= 0.996; RNI= 0.997; (NFI)= 0.995; (RFI)= 0.993; (IFI)= 0.997. The obtained results reveal that the scale has excellent fit values. These findings confirm the factor structure of the Job Performance Scale (Brown, 2006; Browne & Cudeck, 1993; Byrne, 2010, Raykov & Marcoulides, 2006).

According to Table 5, as a result of the ANOVA analysis, it was seen that the difference in job performance between the managers of agricultural enterprises in different villages was significant $p<0.05$. The effect size of this construct was determined as $\eta^2= 0.31$. In other words, it explains 31% of the total variance. A posthoc test was conducted to determine which groups were different and the results of the analysis are given below.

Table 3. Job performance scale fit index values.

Label	X ²	df	p	SRMR	RMSEA	CFI	TLI	NNFI	RNI	NFI	RFI	IFI
model fit	78	33	<.001	0.080	0.102	0.997	0.996	0.996	0.997	0.995	0.993	0.997

Table 4. Job performance scale factor structure acceptance levels.

Fit Dimensions	Measures of fit good fit values	Acceptable fit values	Recommended compliance values
RMSEA	0.00<RMSEA<0.05	0.05<RMSEA<0.10	0.102
SRMR	0.00<SRMR<0.05	0.05<SRMR<0.10	0.080
CFI	0.95<CFI<1.00	0.90<CFI<0.95	0.997
TLI	0.90<TLI<1.00	0.85<TLI<0.90	0.996
NNFI	0.95<NNFI<1.00	0.90<NNFI<0.95	0.996
RNI	0.95<RNI<1.00	0.90<RNI<0.95	0.997
NFI	0.90<NFI<1.00	0.85<NFI<0.90	0.995
RFI	0.90<RFI<1.00	0.85<RFI<0.90	0.993
IFI	0.90<IFI<1.00	0.85<IFI<0.90	0.997

Table 5. ANOVA-Difference in job performance between managers of agricultural enterprises in different villages.

	Sum of Squares	df	Mean Square	F	p	η^2
Village	16.1	10	1.613	5.66	<.001	0.315
Residuals	35.0	123	0.285			



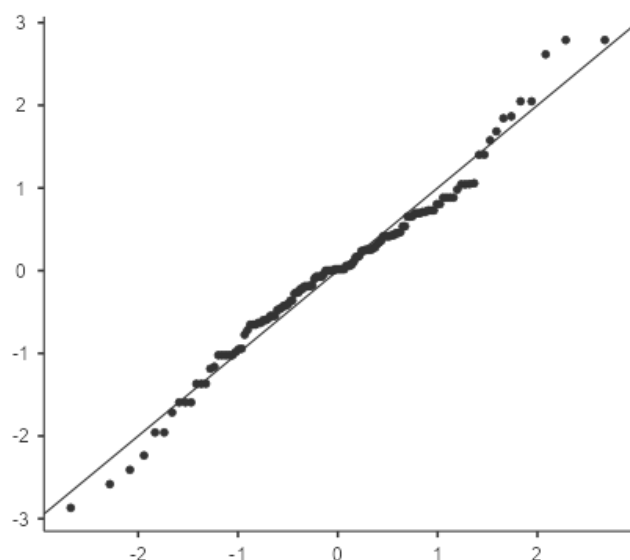


Figure 3. Q-Q Plot.

In the results of the Post-Hoc analysis, it is seen that there is a significant difference between Ortaköy, which is one of the forest villages, and the business managers in Alpaslan, Ulupınar, Büyük Toraman villages in terms of Job

Performance. There is also a significant difference between Balçıkakırı village and Ulupınar village in terms of the Job Performance of the business managers. Finally, there is a significant difference between Ulupınar village and Derebağ and Şeyhşaban villages in terms of Business Managers' Job Performance ($P < 0.01$).

In Table 7, 86 (63.7%) of the 135 respondents stated that they did not benefit from the support, while 49 (36.3%) stated that they benefited from the support. Of the 49 people who benefited from the support, 30 characterized the support as inadequate. Similarly, 79 of the people who did not benefit from the support evaluated the support as inadequate. Of the 135 people who participated in the research, 109 (80.7%) considered the support inadequate.

When Table 8 and Table 9 are evaluated together, it is seen that the average of the respondents who benefited from the support finding it insufficient is $\bar{x} = 0.919$ and the average of finding it sufficient is $\bar{x} = 0.612$ as a result of the t-test $t(133) = 4.64$; $p < 0.01$ and the effect size is calculated as 0.831. This shows that the rate of agricultural enterprise managers who benefit from ORKÖY support finding the support insufficient has a great effect of 83%.

As a result of the analysis in Table 10, $U = 1490$ and this value is significant at $p < 0.01$ level. In the analysis made, it explains 29% of the application to use other loans by those who use

Table 6. Differences between Villages in terms of Job Performance (Post Hoc Comparisons - Village).

Comparison						
Village	Village	Mean Difference	SE	df	t	p
Ortaköy	- Alpaslan	-1.07468	0.237	123	-4.5440	<.001
	- Ulupınar	-1.49747	0.259	123	-5.7751	<.001
	- Büyük Toraman	-1.12013	0.237	123	-4.7361	<.001
Balçıkakırı	- Ulupınar	-1.07215	0.269	123	-3.9868	0.006
Ulupınar	- Derebağ	0.89186	0.220	123	4.0543	0.005
	- Şeyhşaban	0.93838	0.203	123	4.6269	<.001

Note: Comparisons are based on estimated marginal means

Table 7. Agricultural holdings managers' utilization of the support and finding it sufficient.

Utilization status	Adequate vision	n	%	Cumulative %
Yes	Yes	19	14.1 %	14.1 %
	No	30	22.2 %	36.3 %
No	Yes	7	5.2 %	41.5 %
	No	79	58.5 %	100.0 %

Table 8. Independent samples T-Test according to support utilization status.

	Statistic	df	p	Effect Size
Is it enough?	Student's t	4.64 ^a	133	<.001
				Cohen's d
				0.831

Note. $H_0: \mu_0 \neq \mu_1$

Table 9. Group descriptive statistics.

	Group	N	Mean	Median	SD	SE
Is it enough?	Yes	49	0.612	1.00	0.492	0.0703
	No	86	0.919	1.00	0.275	0.0297



Group Descriptives

	Group	N	Mean	Median	SD	SE	U	p	Effect Size
Another loan	0	49	0.184	0.00	0.391	0.0559	1490	0,000	0,293
	1	86	0.477	0.00	0.502	0.0542			

ORKÖY loans. In other words, 29% of the people are likely to apply for other loans other than ORKÖY. In any case, the rate of those who apply to ORKÖY for loans is around 29% among the general loan users within the research.

DISCUSSION

This study revealed important findings on various factors such as demographic characteristics, job performance, educational status, family structure and credit utilization of the beneficiaries of ORKÖY (Forest Villages Project) supports as a result of the survey conducted with 135 business managers in 11 different villages in Kayseri province. The majority (56.30%) of the enterprise managers benefiting from ORKÖY supports are between the ages of 46-65. 82.96% of the beneficiaries are men, which indicates that the project is more common among male managers. 89.63% of the managers participating in the research are married, which indicates a high rate among the beneficiaries of ORKÖY support. In terms of education level, most of the participants (64.44%) are primary school graduates. The proportion of associate, undergraduate and graduate graduates is as low as 6.67%, indicating that the support is generally targeted towards managers with lower levels of education. The average number of children of the participants was 3.07 and the average number of people living in the household was 4.68. The average income of the enterprises is 16,410.61 TL. This shows that the beneficiaries of ORKÖY supports generally have enterprises with medium income.

According to the results of the research, it is seen that there is a significant difference between Ortaköy and Alpaslan, Ulupınar, Büyük Toraman villages in terms of business managers' Job Performance. There is also a significant difference between Balçıcakırı village and Ulupınar village in terms of the Job Performance of the business managers. Finally, there is a significant difference between Ulupınar village and Derebağ and Şeyhşaban villages ($P < 0.01$). These findings suggest that the managers of agricultural enterprises in different villages are affected differently by support purchases and other environmental factors. As a result of the research, most of the beneficiaries of ORKÖY support (83%) evaluate the support as inadequate. 29% of the beneficiaries stated that they would consider applying for other loans other than ORKÖY loans. This situation reveals that ORKÖY credit support is insufficient and the need to apply to other financial resources. Literature studies show that studies on job performance in the agricultural sector have been conducted especially for agricultural extension personnel or those working in agriculture. In addition, it is seen that the studies are studies on the relationships between job performance, demographic factors and motivation issues rather than examining the agricultural supports provided in depth (Adebayo et al., 2020; Fabusoro et al., 2008; Rathod & Deshmukh, 2022; Rezaie et al., 2008). Although demographic

factors come to the fore in this study, data results such as differences between villages and levels of influence from environmental factors were also obtained. This situation reveals that studies in the literature should go beyond demographic factors.

Conclusion: Considering that the majority of those benefiting from ORKÖY support have primary school education, training programs should be organized for people with higher education levels. These programs can increase the business management, financial literacy and technological innovation skills of business managers. The gender distribution shows that ORKÖY support is provided more to male managers. Special incentives and support can be provided to women entrepreneurs in order to increase the participation of women managers in the project. In addition, policies should be developed to encourage women's participation in the workforce. Significant differences were found between the business performances of business managers in different villages. The reasons for these differences should be investigated and targeted strategies should be developed to eliminate inequalities between villages. In particular, in villages with low performance, general business performance can be increased by providing more support and training. ORKÖY support was evaluated as insufficient by a large number of participants. In this context, the scope of the support should be expanded and more resources should be provided, especially in terms of finance. In addition, providing the loans with more flexible conditions will better meet the financial needs of business managers. The rate of people using ORKÖY loans applying for other loans shows that these loans are inadequate. Therefore, the amount and interest rates of ORKÖY loans should be reviewed, and if necessary, more suitable loan opportunities should be provided by collaborating with other financial institutions.

These recommendations will guide the ORKÖY project for a more effective and comprehensive implementation. In addition, they will contribute to the sustainable economic development of forest villages by increasing the efficiency of business managers who receive support.

The study has several limitations. Since the research was conducted in forest villages in the Kayseri province, the findings may not be representative of forest villages in other regions. The study is cross-sectional in nature, and conducting a longitudinal study in the future could yield different results. Additionally, there were time constraints during the research process. With the onset of the agricultural season, it became challenging to reach farm enterprise managers who were working in the field.

CRedit author statement: This study was entirely prepared, analyzed, interpreted and finalized by Halil Ozcan Ozdemir. The author's contribution is 100%.



Consent to participate: Informed consent was obtained from all individual participants included in the study.

Ethical approval: All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Consent for publication: All individual participants agreed to be included in the study.

Funding: The author did not receive funding support from any organization for this work. No funding was received to assist with the preparation of this manuscript. No funding was received for conducting this study. No funds, grants, or other support was received.

Informed consent: Written informed consent was obtained from all participants regarding publishing their data.

Conflicts of interest: The author declare that there is no conflict of interest in this work.

Consent for publication: The author submitted consent to publish this research article in JGIAS.

Availability of data: All data used are within the manuscript.

Informed consent: Written informed consent was obtained from all participants regarding publishing their data and photographs

SDGs addressed: No Poverty; Zero Hunger; Responsible Production and Consumption; Decent Work and Economic Growth.

Policy referred: Forest Villages Development Support Program (ORKÖY - Orman Köyleri Kalkındırma Dairesi Başkanlığı supports).

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